

Serial No.: 10/790,492

Docket No.: MIO 0082 N2/40509.292

Remarks

Claims 1-11 are pending in the present application. Claims 1 and 7-11 are amended. No new matter has been entered.

Per the examiner's request, we submit herein what we believe to be legible copies of the non-patent literature and a copy of the 1449 form filed on June 7, 2004 in accordance with 37 CFR 1.98(a)(2), thus the IDS and all references therein should be considered.

Claims 1 and 3-11 were rejected under 35 USC 103(a) as being unpatentable over Schuegraf et al (US 5,624,865) in view of Lee et al (US 2002/0068466). Claim 2 is rejected as being unpatentable over Schuegraf in view of Lee as applied to claim 1, and further in view of Thakur (US 5,407,534). The rejections are respectfully traversed, because none of the references teach or suggest all elements of the claimed invention.

Independent claims 1 and 7-11 all recite, *inter alia*, that a substantially flat temperature distribution is maintained across the semiconductor substrate as the first precursor is chemisorbed and as the second precursor is reacted with the chemisorbed precursor as recited in the claims. This recitation is fully supported by the specification. *See generally* ¶ [0016].

Schuegraf, which fails to teach ALD, also fails to teach a flat temperature distribution as recited in the claims, Scheugraf teaches an approximate range of deposition temperatures and an approximate range of reoxidation anneal temperatures; however, fails to teach a temperature distribution across the semiconductor substrate during the formation of a dielectric layer, much less a flat temperature distribution as recited. Lee also fails to teach this claimed invention. Lee does not mention the temperature of the semiconductor substrate, nor does Lee teach or suggest a flat temperature distribution across the semiconductor substrate as recited in the amended claims. Similarly, Thakur, which also does not teach ALD, fails to teach a temperature of the

Serial No.: 10/790,492
Docket No.: MIO 0082 N2/40509.292

semiconductor, much less a flat temperature distribution across the substrate. Accordingly, none of the cited references, teach or suggest a substantially flat temperature distribution maintained as recited in the claims.

Double Patenting Rejection

Claims 1-11 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,551,893 (Zheng et al) in view of U.S. Patent No. 5,407,534 (Thakur). A terminal disclaimer has been filed in the case, thus this rejection should be removed.

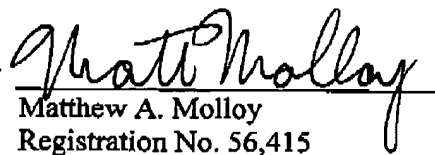
Conclusion

The Applicants respectfully submit that, in view of the above amendments and remarks, the application is now in condition for allowance. The Examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully requested.

Respectfully submitted,

DINSMORE & SHOHL LLP

By


Matthew A. Molloy
Registration No. 56,415

One Dayton Centre
One South Main Street, Suite 1300
Dayton, Ohio 45402
Telephone: (937) 449-6400
Facsimile: (937) 449-6405
e-mail: matthew.molloy@dinslaw.com